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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,397	03/22/2006	Randy J. Sayers	14432	9452
7590 04/29/2009				
Paul F Donovan Illinois Tool Works Inc 3600 West Lake Avenue Glenview, IL 60026				
EXAMINER				
HAUTH, GALEN H				
ART UNIT		PAPER NUMBER		
1791				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/573,397

Applicant(s)

SAYERS ET AL.

Examiner

GALEN HAUTH

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 24-42 and 44-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date 06/05/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-23 and 43 in the reply filed on 03/09/2009 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Salas et al. (PN 6328548).

With regards to claims 1 and 43, Salas teaches an apparatus for molding onto a stretched preform (abstract, Fig. 2) comprising a first and second mold part (col 4 In 44-48) and a stretching assembly with clamping members that slide along the rails (col 6 In 49-56) as well as an apparatus for closing the mold plates (col 7 In 55-57).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-10, 16-23, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Froelicher et al. (PN 5235908) in view of Salas et al. (PN 6328548).

a. With regards to claims 1 and 43, Froelicher teaches a fabric stretching apparatus (abstract) including a plurality of slide assemblies for selectively moving clamp assemblies to apply a stretch to the blank (col 9 In 10-27) for the purpose of attaching a carrier frame thereto (col 10 In 35-43). Froelicher does not teach the inclusion of mold parts.

b. Salas teaches a method for molding a carrier frame to a fabric (abstract) in which as seen in Fig. 1 mold upper and lower mold parts (120, 130) are placed within a stretching loom (160, 162) to apply the carrier frame to the stretched fabric (40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use upper and lower mold parts as taught by Salas to form the carrier frame using the stretching apparatus of Froelicher, because Froelicher teaches using any known carrier frame attachment method thus one of ordinary skill in the art would look to related references for a method of attachment.

- c. With regards to claim 2, Froelicher teaches that the slide assemblies are movably mounted to the frame (col 9 ln 21-27), and Froelicher in view of Salas as applied above teaches applying the mold parts inside the frame of Froelicher as seen in the Fig. 1 of Salas.
- d. With regards to claims 3-7, Salas teaches that the mold is movable through a spring or hydraulic action to open and close (col 7 ln 54-58).
- e. With regards to claim 8, Salas teaches a protruding portion coming from the second mold plate to meet the frame (Fig. 1).
- f. With regards to claims 9 and 10, Froelicher teaches using hydraulics (5) and pivot action (4) to stretch (Fig. 3).
- g. With regards to claim 16, Froelicher teaches a fabric stretching apparatus (abstract) including a plurality of slide assemblies for selectively moving clamp assemblies to apply a stretch to the blank (col 9 ln 10-27) for the purpose of attaching a carrier frame thereto (col 10 ln 35-43). Froelicher teaches that the slide assemblies are movably mounted to the frame (col 9 ln 21-27). Froelicher does not teach the inclusion of mold parts.
- h. Salas teaches a method for molding a carrier frame to a fabric (abstract) in which as seen in Fig. 1 mold upper and lower mold parts (120, 130) are placed within a stretching loom (160, 162) to apply the carrier frame to the stretched fabric (40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use upper and lower mold parts as taught by Salas to form the carrier frame using the stretching apparatus of Froelicher,

because Froelicher teaches using any known carrier frame attachment method thus one of ordinary skill in the art would look to related references for a method of attachment.

i. With regards to claim 17, Froelicher in view of Salas as applied above teaches applying the mold parts inside the frame of Froelicher as seen in the Fig. 1 of Salas.

j. With regards to claims 18 and 19, Salas teaches that the mold is movable through a spring or hydraulic action to open and close (col 7 ln 54-58).

k. With regards to claims 20-21, Froelicher teaches using hydraulics (5) and pivot action (4) to stretch (Fig. 3).

l. With regards to claim 22, Froelicher does not teach the inclusion of a strain gauge; however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a strain gauge between the stretch cylinder and the plate to improve the process control of the apparatus as strain gauges are well known in the art.

m. With regards to claim 23, Salas does not teach the inclusion of alignment rods and guide holes; however, alignment rods and guide holes are well known in the molding art to maintain proper orientation and alignment of two movable mold pieces thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include alignment rods and guide holes in the molding equipment taught by Salas and Froelicher.

7. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Froelicher et al. (PN 5235908) in view of Salas et al. (PN 6328548) as applied to claim 10 above, and further in view of Frigo (PN 4022091).

- a. With regards to claim 11, Froelicher in view of Salas does not teach the inclusion of fabric pins, a robot, or placing pins.
- b. Frigo teaches the use of an endless pin conveyor to guide a fabric in a process for applying fabric to frames (abstract). Frigo teaches that the fabric leaves the pin chain to corresponding pins on the frame (col 8 ln 52-56). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an automated process such as a robotic arm using pins that hold the fabric and transfer to pins on the frame to ensure proper arrangement of the fabric in the molding process and using robotics is an obvious improvement over manual placement of the fabric.
- c. With regards to claim 12, Froelicher in view of Salas and Frigo do not teach the use of ejector sleeves; however, ejector sleeves are well known in the art for removal of a product from a set position, thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include ejector sleeves on the pins to assist removal of the fabric from the first set of pins.

8. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Froelicher et al. (PN 5235908) in view of Salas et al. (PN 6328548) and Frigo (PN

4022091) as applied to claim 11 above, and further in view of Chuang et al. (PN 6361654).

- a. With regards to claim 13, Froelicher in view of Salas and Frigo does not teach the inclusion of an air knife.
- b. Chuang teaches that it was known in the art at the time the invention was made to use an air knife to assist in sheet transfer during an automated process (abstract). Given that the process of Froelicher in view of Salas and Frigo requires the transfer of a sheet of material, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an air knife to assist the transfer of material in the process of Froelicher.
- c. With regards to claims 14-15, Froelicher teaches the use of pressure regulating and synchronizing means (col 10 ln 55-68, regulating the pressure and distance of each slide mechanism or block controls the stretch of the fabric providing a measurement corresponding to said pressure and synchronization).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GALEN HAUTH whose telephone number is (571)270-5516. The examiner can normally be reached on Monday to Thursday 8:30am-5:00pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571)272-1176. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GHH/

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791